

AMENDMENT UNDER 37 C.F.R. § 1.111

Application No.: 09/677,188

Atty Docket No.: Q56451

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (currently amended): A composite structure, ~~which has~~ having a photocatalytic function ~~and which~~ can be used for deodorization and wastewater treatment, comprising a foamed or porous substrate having apparent specific gravity of 0.9 to 0.01 and finely divided titanium oxide particles having an average particle diameter of 0.005 μm to 0.3 μm which are adhered onto the surface of the foamed or porous substrate.

Claim 2. (original): The composite structure according to claim 1, wherein said composite structure is capable of floating on water.

Claim 3. (canceled).

Claim 4. (original): The composite structure according to claim 1, wherein the finely divided titanium oxide particles are adhered to the substrate through a binder.

Claim 5. (currently amended): The composite structure according to claim ~~14~~, wherein the binder is at least one compound selected from the group consisting of phosphor-containing compounds, zirconium-containing compounds and silicon-containing compounds.

Claim 6. (original): The composite structure according to claim 1, wherein the substrate is made of at least one material selected from the group consisting of expanded obsidian, and foamed or porous perlite.

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Claim 7. (currently amended): A method for deodorizing gas having offensive odor or treating wastewater, comprising the step of allowing gas having offensive odor or wastewater to be in contact with a composite structure having a photocatalytic function, which comprises a foamed or porous substrate having apparent specific gravity of 0.9 to 0.01 and finely divided titanium oxide particles having an average particle diameter of 0.005 μm to 0.3 μm which are adhered onto the surface of the foamed or porous substrate, whereby smelly or harmful substances contained in the gas or wastewater are decomposed.

Claim 8. (original): The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the air having offensive odor or wastewater is allowed to be in contact with the composite structure having a photocatalytic function, which floats on water.

Claim 9. (canceled).

Claim 10. (original): The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the finely divided titanium oxide particles are adhered to the substrate through a binder.

Claim 11. (currently amended): The method for deodorizing air having offensive odor or treating wastewater according to claim ~~7~~10, wherein the binder is at least one compound selected from the group consisting of phosphor-containing compounds, zirconium-containing compounds and silicon-containing compounds.

Claim 12. (currently amended): The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the substrate is made of at least one

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material selected from the group consisting of expanded obsidian, ~~and~~ foamed or porous perlite,
a rounded product of wire, ceramic fiber, and a foamed cement product.

Claim 13. (New) The composite structure according to claim 4, wherein the binder is
a water-soluble zirconium compound.

Claim 14. (New) The composite structure according to claim 13, wherein the water-
soluble zirconium compound is selected from the group consisting of zirconium nitrate,
zirconium sulfate, zirconium acetate, zirconium ammonium carbonate, zirconium propionate,
complexes of a zirconium compound having at least one of hydroxyl, carbonate and
alkylcarboxyl groups, and polymers thereof.

Claim 15. (New) The composite structure according to claim 4, wherein the binder is
a silicate.

Claim 16. (New) The composite structure according to claim 1, wherein the foamed
or porous substrate has an apparent specific gravity of 0.7 to 0.01.

Claim 17. (New) The composite structure according to claim 1, wherein the foamed
or porous substrate has an apparent specific gravity of 0.4 to 0.01.